

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 11-091958

(43)Date of publication of application : 06.04.1999

(51)Int.Cl.

B65H 1/26

B41J 13/00

B65H 1/00

(21)Application number : 09-254926

(71)Applicant : SONY CORP

(22)Date of filing : 19.09.1997

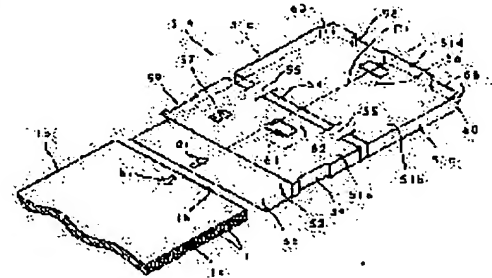
(72)Inventor : HIGUCHI MASARU  
KATSUNO HIROSHI  
FUJITA MASAhide

## (54) PAPER PACKAGE AND PRINTER

## (57)Abstract:

PROBLEM TO BE SOLVED: To easily set paper to a color printer or the like.

SOLUTION: A paper package 51A is formed in a square shape by a synthetic resin sheet and is formed in an angular bag shape. The device is provided with a paper entrance 52, a slit 54, a paper last-in preventing claw 56, a paper kind judging bar code 57, an error insertion preventing cutout 58, a paper positioning hole 59, and a paper existence judging hole 61.



**\* NOTICES \***

**JPO and NCIPi are not responsible for any damages caused by the use of this translation.**

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

---

**CLAIMS**

---

[Claim(s)]

[Claim 1] The form package characterized by forming at least form receipts-and-payments opening are consisted of by saccate [ which is a rectangle-like and was square with the synthetic-resin sheet ], and take a form in and out of which in the state of a laminating.

[Claim 2] The form package according to claim 1 characterized by putting in after a form and forming the pawl for prevention.

[Claim 3] The form package according to claim 1 characterized by displaying the code for class distinction of a form.

[Claim 4] The form package according to claim 1 characterized by forming the incorrect insertion prevention means to a printer.

[Claim 5] The form package according to claim 1 characterized by the thing of the form path of insertion for which the bendable part is mostly formed in pars intermedia only in the one direction.

[Claim 6] The form package according to claim 1 characterized by forming the hole for existence distinction of a form.

[Claim 7] The form package according to claim 1 characterized by forming form location \*\*\*\*\* to a printer.

[Claim 8] The form package according to claim 1 characterized by forming the guide piece for form receipts and payments in the underside of form receipts-and-payments opening.

[Claim 9] The printer characterized by having the paper tray to which a form is set with a form package according to claim 1.

[Claim 10] The paper tray to which a form is set with a form package according to claim 3, and the printer characterized by having the sensor for class distinction which reads the code for class distinction of the above-mentioned form package.

[Claim 11] The printer characterized by having the paper tray to which a form is set and forming the engagement section of the incorrect insertion prevention means of the above-mentioned form package in the above-mentioned paper tray with a form package according to claim 4.

[Claim 12] The printer characterized by having the lift plate for feeding with which it is attached free [ a revolution ] and the above-mentioned form receipts-and-payments opening side is laid rather than the bendable part of the above-mentioned form package with a form package according to claim 5 in the paper tray to which a form is set, and the above-mentioned paper tray.

[Claim 13] The printer characterized by having the sensor for existence distinction inserted into the paper tray to which a form is set with a form package according to claim 6, and the hole for existence distinction of the above-mentioned form package.

[Claim 14] The printer characterized by to form form location \*\*\*\*\* of a left Uichi pair which is equipped with the lift plate for feeding attached free [ a revolution ] in the paper tray to which a form is set, and the above-mentioned paper tray, is inserted in the above-mentioned lift plate for feeding relatively in form location \*\*\*\*\* of the right-and-left both sides of the above-mentioned form package, and performs location \*\*\*\* of the longitudinal direction of the form with a form package according to claim 7.

---

[Translation done.]

**\* NOTICES \***

**JPO and NCIPi are not responsible for any damages caused by the use of this translation.**

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

---

**DETAILED DESCRIPTION**

---

**[Detailed Description of the Invention]****[0001]**

**[Field of the Invention]** This invention belongs to the technical field of the optimal form package for applying to for example, a color video printer, and a printer.

**[0002]**

**[Description of the Prior Art]** From the former, the print of the color picture photoed with the video camera etc. is carried out to the photographic paper which is a form by the hot printing method by color printers, such as a color video printer, using the thermal head, the platen, and the ink ribbon. And there are a sublimation mold color printer which carries out hot printing of the color material (color) of three to 4 colors, such as cyanogen, a Magenta, yellow, and black, by the sublimation method, and a color printer of a melting osmosis method which carries out hot printing by the melting osmosis method as this seed color printer, and photographic paper is properly used according to the class of color printer. And surface coefficient of friction is small, and the photographic paper used by which color printer is also glossy, and it is constituted [ the special form on which carries out a vine vine and it is very easy to slide and which has weight is used, and ] so that the photographic paper of 50-100 sheets may be inserted into a paper tray in the state of a laminating and it may set into a color printer like common FAX and a common copy machine (load).

**[0003]**

**[Problem(s) to be Solved by the Invention]** On the other hand, the approach of the photographic paper used by this seed color printer opening a plastic bag, taking out internal photographic paper with a laminating condition, and inserting and setting it in a paper tray, in case it is usually packed by the laminating condition in the plastic bag per 100 sheets etc. and a user sets photographic paper in a color printer is taken. However, if the balance of the photographic paper which it has by hand during the set activity of the photographic paper since photographic paper carries out a vine vine, it is very easy to slide and there is weight may be lost, photographic paper will carry out rose \*\*\*\* simply, and it is easy to make it fall to above the floor level etc. relaxedly. And if it seems that it may be made to fall above the floor level etc., the front face of photographic paper will be damaged or the image quality after print workmanship and grace will deteriorate remarkably by adhesion of dust etc. Therefore, photographic paper could not be violently carried like the set activity of the form in common FAX or a common copy machine, but paying [ damaged the front face of photographic paper, or ] careful attention so that dust etc. may not be made to adhere, the user had to do the set activity of photographic paper and was dramatically troublesome. Moreover, since it was necessary to use photographic paper properly according to the class of color printer, the user had to check the class of photographic paper by the eye during the set activity of photographic paper each time, and was dramatically complicated.

**[0004]** This invention is made in order to solve the above-mentioned problem, and it aims at offering the printer which uses the form package which can do the set activity of the form to a color printer etc. easily, and its form package.

**[0005]**

**[Means for Solving the Problem]** The form package of this invention for attaining the above-mentioned object is constituted by saccate [ which is a rectangle-like and was square with the synthetic-resin sheet ], and it is constituted so that a form can be taken in and out of form receipts-and-payments opening in the state of a laminating.

**[0006]** The form package of this invention constituted as mentioned above is a form manufacturer, and where the form of 50-100 sheets is beforehand contained in the laminating condition in a form package, it

can pack up with a plastic bag etc., a user can be supplied, and a user opens a plastic bag and can set the form of a laminating condition at once into the paper tray of a printer with a form package.

[0007]

[Embodiment of the Invention] Hereafter, the gestalt of operation of the form package which applied this invention, and a printer is explained with reference to drawing.

[0008] "the 1st operation gestalt of a form package" -- the 1st operation gestalt of form package 51A for containing first the photographic paper 1 which is a form of A3 large size used for color printers, such as a color video printer, in the state of a 50 - 100-sheet laminating by drawing 1 - drawing 7 is explained.

[0009] First, this form package 51A is thickness T1. With the synthetic-resin sheet which is 0.4 etc.mm etc. and has the moderate rigidity of a polypropylene sheet etc., it is constituted by saccate [ which is a rectangle-like and was square ] (shallow core box), and the 5th page of underside 51a, top-face 51b, right-and-left both-sides side 51c, and 51d of back end sides is blockaded. And the form receipts-and-payments opening 52 is formed in the front end side, and the guide piece 53 for form receipts and payments is ahead extended by one from underside 51a of the form receipts-and-payments opening 52. The die-length direction (an arrow head a1 and b1 direction) of this form package 51A mostly and in pars intermedia The slit 54 which covered top-face 51b and right-and-left both-sides side 51c, cut, and was lacked is formed in the right angle to the die-length direction, and the small connection piece 55 which connects two places of the slit 54 in the die-length direction (an arrow head a1 and b1 direction) is formed in top-face 51b. And the bendable part [ an upper one direction ] constitutes this form package 51A by these slits 54 and the connection piece 55.

[0010] And it puts in after the form bent by the front lower part from top-face 51b of this form package 51A, and the pawl 56 for prevention is the pin center, large P1 of this form package 51A. It is formed in the location biased at 51d side of back end sides in the top. Moreover, the code 57 for form class distinction which is a bar code of a light reflex mold etc. sticks on the location biased in the 1 side in the near location of the form receipts-and-payments opening 52 on top-face 51b of this form package 51A, and it is displayed by the seal, printing, etc. And the notch 58 for incorrect insertion prevention which constitutes the incorrect insertion prevention means in 51d of back end sides of this form package 51A is a pin center, large P1. It receives and is formed in the unsymmetrical configuration. And form location \*\*\*\*\* 59 and 60 of a left Uichi pair is formed in the location biased at the form receipts-and-payments opening 52 side, and right-and-left both the corners by the side of 51d of back end sides, respectively by right-and-left both-sides side 51c of this form package 51A. And in the location biased a little from the slit 54 at the form receipts-and-payments opening 52 side by vertical both sides 51a and 51b of this form package 51A, the holes 61 and 62 for form existence distinction of a vertical couple are pin center, large P1. It is formed in the condition of having received and having been biased a little in the other sides.

[0011] in addition, the length L before this form package 51A (an arrow head a1 and b1 lay length) -- 1 = about 528mm and full [ W ] (an arrow head c1 and d1 lay length) -- 1 = about 334mm and thickness T -- it is constituted by 2 = about 14mm. moreover, the width of face W of a slit 54 -- after 2 = about 10mm and a form -- putting in -- width-of-face W3 = of the pawl 56 for prevention -- about 50mm the width of face W of the notch 58 for incorrect insertion prevention -- 6 = about 50mm and depth D1 = -- about 46mm the width of face W of form location \*\*\*\*\* 59 of a left Uichi pair by the side of the form receipts-and-payments opening 52 -- the width of face W of form location \*\*\*\*\* 60 of a left Uichi pair by the side of 4 = about 83mm, and depth D 1 = about 4mm and 51d of back end sides -- 5 = about 19mm and depth D -- it is constituted by 1 = about 4mm.

[0012] It is constituted as mentioned above, and is a form manufacturer, and this form package 51A is an arrow head a1 from the form receipts-and-payments opening 52 to the interior about the photographic paper 1 of the laminating condition of 50-100 sheets. It inserts in a direction, and contains, the periphery of this whole form package 51A is packed up with a plastic bag (not shown) etc., and it is made to supply a user. In addition, as a continuous line shows to drawing 5 before photographic paper receipt, it puts in after a form, and the pawl 56 for prevention is an arrow head e1 by the elasticity of its confidence. It has bent in the direction, as a dashed line shows to drawing 5, it puts in after this form, and it is an arrow head f1 about the pawl 56 for prevention. It is in the condition resisted and bent to elasticity in the direction, and photographic paper 1 is contained in this form package 51A. Moreover, at the time of photographic paper insertion into this form package 51A, by the guide piece 53 for form receipts and payments, photographic paper 1 can be guided and that photographic paper 1 can be inserted smoothly. And back end side 1b of the photographic paper 1 inserted into this form package 51A is positioned in contact with stopper side 51e currently formed in the inside which is 51d of back end sides. It is constituted so that two places, two right and left of the near location of the form receipts-and-payments

opening 52 in right-and-left both-sides side 1c of this photographic paper 1 and right-and-left both the corners by the side of back end side 1b, may be exposed to form location \*\*\*\*\* 59 and 60 of one pair each of right and left.

[0013] "The 2nd operation gestalt of a form package" next drawing 8 - drawing 13 show the 2nd operation gestalt of form package 51B for containing the photographic paper 1 which is a form of A4 large size used for color printers, such as a color video printer, in the state of a 50 - 100-sheet laminating. Other structures only consist of equally that form location \*\*\*\*\* 60 of right-and-left both the corners of 51d of back end sides in form package 51A mentioned above is omitted. However, pin center, large P1 whose notch 58 for incorrect insertion prevention is 51d of back end sides It receives and is offset OS 1 to the 1 side. It is formed in the location carried out. and the overall length L of this form package 51B -- 11 = about 312mm and full [ W ] -- 11 = about 334mm and thickness T -- it is constituted by 12 = about 12mm, and is constituted on a par with form package 51A which mentioned above other dimensions for the structured division.

[0014] "The operation gestalt of a paper tray" next drawing 14 - drawing 22 explain the operation gestalt of the paper tray 2 currently used for color printers, such as a color video printer. That is, conventionally, this paper tray 2 is fabricated with synthetic resin so that it may be well-known, it is constituted by front panel 2a, pars-basilaris-ossis-occipitalis 2b, 2d of right-and-left both-sides sections, and back end section 2e, and is constituted by the shallow rectangle-like core box by which the upper part was opened. And the lift plate 37 for feeding which crevice 2c is formed in the tooth space of side abbreviation one half front [ in the top face of pars-basilaris-ossis-occipitalis 2b ], and was formed with the sheet metal etc. in this crevice 2c is contained.

[0015] And this lift plate 37 for feeding is concentric [ of a left Uichi pair ] about the right-and-left both sides by the side of that back end. It is attached in the vertical direction free [ a revolution ] by the level supporting-point pin 38 inside 2d of right-and-left both-sides sections of a paper tray 2. The cross direction of this lift plate 37 for feeding mostly on right-and-left both sides of pars intermedia Form location \*\*\*\*\* 39 of a left Uichi pair mostly started in the shape of a KO character towards the upper part is formed in one. Moreover, the sensor insertion hole 41 which laps with the sensor insertion hole 40 formed in pars-basilaris-ossis-occipitalis 2b of a paper tray 2, and other holes are formed in this lift plate 37 for feeding.

[0016] And 2f of notches for sensor passage is formed in back end section 2e of a paper tray 2, and the heights 42 for incorrect insertion prevention which are the engagement section to the notch 58 for incorrect insertion prevention are formed in one place only inside the corner part by the side of 2d of one flanks of back end section 2e at one. And inside right-and-left both the corners by the side of [ 2d of right-and-left both-sides sections of this paper tray 2 ] back end section 2e, the location \*\*\*\*\* heights 43 of a left Uichi pair are formed at one. And the attaching hole 44 is formed in the location which approached the lift plate 37 for feeding on the top face of pars-basilaris-ossis-occipitalis 2b of this paper tray 2, it is only for form package 51B, and the incorrect insertion prevention implement 45 which is the engagement section to the notch 58 for incorrect insertion prevention is attached in this attaching hole 44 possible [ description ].

[0017] In case this paper tray 2 is constituted as mentioned above and a user sets photographic paper 1 in this paper tray 2 As mentioned above, after opening the plastic bag of the form packages 51A and 51B packed up and supplied etc., with the form packages 51A and 51B It is an arrow head a1 in a paper tray 2 about the photographic paper 1 of the laminating condition of 50-100 sheets. It can set at once from a direction (refer to drawing 22 ). Therefore, since it can set at once in a paper tray 2, containing the photographic paper 1 of the laminating condition of 50-100 sheets in form package 51A and 51B, during the set activity, inconvenience to which photographic paper 1 drops rose \*\*\*\*\* , above the floor level, etc. cannot carry out \*\*\*\*\* generating, but can set photographic paper 1 simply and quickly in a paper tray 2.

[0018] In addition, drawing 17 - drawing 20 show the condition of having set form package 51A in the paper tray 2. If it sets so that the notch 58 for incorrect insertion prevention of 51d of back end sides of this form package 51A may be made to engage with the heights 42 for incorrect insertion prevention, and it sets so that a front side may be piled up on the lift plate 37 for feeding from a slit 54 Form location \*\*\*\*\* 39 of a left Uichi pair of the lift plate 37 for feeding is inserted relatively in form location \*\*\*\*\* 59 of a left Uichi pair. Moreover, the form location \*\*\*\*\* heights 43 of a left Uichi pair are inserted relatively in form location \*\*\*\*\* 60 of a left Uichi pair, a slit 54 is arranged between the supporting-point pins 38 of the left Uichi pair of the lift plate 37 for feeding, and the holes 61 and 62 for form existence detection pile up on the sensor insertion hole 40 and 41.

[0019] And right-and-left both-sides side 1c of the photographic paper 1 in form package 51A is positioned by form location \*\*\*\*\* 39 of one pair each of right and left, and the form location \*\*\*\*\* heights 43, and photographic paper 1 is the tray pin center, large P2. It is positioned by accuracy upwards. [0020] Moreover, drawing 21 shows the condition of having set form package 51B in the paper tray 2, in this case, where the incorrect insertion prevention implement 45 is beforehand attached in an attaching hole 44, it sets form package 51B to a front location from that incorrect insertion prevention implement 45, and it is made to make the notch 58 for incorrect insertion prevention engage with the incorrect insertion prevention implement 45. And a function equivalent to the time of the set of form package 51A will be performed also in this case.

[0021] Therefore, since it has the heights 42 for incorrect insertion prevention, and the engagement section of the notch 58 for incorrect insertion prevention of incorrect insertion prevention implement 45 grade, this paper tray 2 can prevent beforehand these incorrect insertion at the time of setting the form packages 51A and 51B in a paper tray 2 (error of the sense of order, right and left, and the upper and lower sides). And as shown in drawing 18, it puts into the form packages 51A and 51B after a form, and the pawl 56 for prevention is an arrow head f1. Since it is bent and arranged in the direction, even if a user is going to insert later the photographic paper 1 in which classes differ accidentally, it puts in after a form, and the photographic paper 1 can run, and cannot insert in the pawl 56 for prevention, but it can put in after the form by the user, and can prevent actuation beforehand.

[0022] "The operation gestalt of a color printer" next drawing 2222 - drawing 27 explain the color printers 01, such as a color video printer. First, in case the code sensor 47 which be a sensor for form class distinction of the light reflex mold which distinguish the class of photographic paper 1 to the receipts and payments path up side of the paper tray 2 of this color printer 01 as show in drawing 23 - drawing 26 incline a little in the front upper part, it be arrange and a paper tray 2 be take in the arrow head g from a color printer 01, and the direction of h, it will be move relatively [ that code sensor 47 / 2f of notches of a paper tray 2 ]. Moreover, as the sensor 46 for form existence distinction is arranged at the receipts-and-payments path bottom of the paper tray 2 of this color printer 01 and SENNSA 46 for form existence distinction of \*\*\*\* is shown in drawing 26 Body of sensor 46a supported free [ a revolution ] centering on the supporting-point pin 48 in the arrow head j which is the vertical direction, and the direction of i, The arrow head j1 which is the vertical direction through the supporting-point pin 49 at the head of the body of sensor 46a, i1 It is constituted by two-step structure with sensor point 46b attached in the direction free [ a revolution ], the sensor point 46b is twisted to body of sensor 46a, and it is an arrow head j1 to a fixed include-angle condition by the revolution energization means 50, such as a coil spring. Revolution energization is carried out in the direction. And photograph SUKAPURA 46c which detects the revolution location of the sensor point 46b and which is a detection means is attached at the head of body of sensor 46a.

[0023] And as a dashed line and a continuous line show to drawing 24, where the sensor 46 whole for form existence distinction and the feed lever 3 are rotated and evacuated in an arrow head i and the direction of b, receipts-and-payments actuation of the paper tray 2 is carried out in an arrow head g and the direction of h. And if a paper tray 2 is set in a color printer 01 and a print starts as a continuous line shows to drawing 24, revolution actuation of the sensor 46 whole for form existence distinction will be first carried out in the direction of arrow-head j, and as shown in drawing 26, sensor point 46b will be inserted from the sensor insertion holes 40 and 41 into the hole 61 for form existence distinction of the form packages 51A and 51B. And when there is photographic paper 1 in form package 51A and 51B, sensor point 46b collides with the underside of the photographic paper 1, and the revolution energization means 50 is resisted, and it is an arrow head i1. Since it escapes in a direction, photo-coupler 46c detects those with a form. And when there is no photographic paper in form package 51A and 51B, sensor point 46b is inserted to the newest section in form package 51A and 51B, and it is the arrow head i1 of sensor point 46b. Since the recess to a direction does not occur, photo-coupler 46c detects those without a form.

[0024] After a color printer 01 distinguishes the above form existence, as shown in drawing 25, it rotates the feed lever 3 in the direction of arrow-head a which is the upper part, and pushes up the lift plate 37 for feeding in the direction of arrow-head a by koro 3a at the head of this feed lever 3. Then, this lift plate 37 for feeding rotates in the direction of arrow-head a centering on the supporting-point pin 38 of a left Uichi pair. While the front end side of form package 51A is pushed up in the direction of arrow-head a and head 1a of topmost part photographic paper 1 is stuck to the feed roller 4 by pressure from arrow-head a with this lift plate 37 for feeding The code 57 for form class distinction of form package 51A approaches the code sensor 47, and the class of photographic paper 1 is distinguished automatically. In addition, the front end side (form receipts-and-payments opening 52 side) of form package 51A can be sagged up by the slit

54 of form package 51A in this case.

[0025] in addition, when this paper tray 2 is set in a color printer 01 after the user had put photographic paper 1 on the upper part of a paper tray 2 accidentally as a dashed line shows to drawing 24 As shown in drawing 25 , when the front end side of form package 51A is pushed up by the feed lever 3, Since the photographic paper 1 inserted accidentally cannot approach the code sensor 47 and the code sensor 47 cannot read the code 57 for form class distinction of form package 51A, a user will be told about a problem being in the set condition of form package 51A.

[0026] Next, drawing 27 explains the print point of the color picture by the color printer 01.

"Explanation [ of the whole feeding ]", i.e., as mentioned above, after the photographic paper 1 of 50-100 sheets is set at once in a paper tray 2 in the state of a laminating with the form packages 51A and 51B, the photographic paper 1 in a paper tray 2 is lifted up by the feed lever 3, the top photographic paper 1 is stuck to the lower part of feeding [ the 1st step of ] roller 4 by pressure, and photographic paper 1 is fed to the feed path 5 with the feed roller 4. And by two or more steps of conveyance means after the 2nd step, the feed belt 6 arranged in accordance with this feed path 5, and two or more feed roller 7 grades, while that photographic paper 1 of one sheet is guided in two or more feed guides 9, it is constituted so that even print equipment 11 may be conveyed in the direction of arrow-head c, as a continuous line shows along the inside of that feed path 5.

[0027] After the print of the color picture is carried out to photographic paper 1 by the print process of print equipment 11 which is mentioned later, photographic paper [ finishing / a print ] 1 with and two or more steps of conveyance means of two or more delivery roller 13 grades arranged in accordance with the delivery path 12 As photographic paper 1 shows by the dotted line on the delivery base 16 which was conveyed in the direction of arrow-head f in accordance with the delivery path 12, and was formed in the case upper part of a set etc., showing around in two or more delivery guides 15, paper is delivered in the direction of arrow-head f. It is constituted so that the print process of the color picture per photographic paper may be ended.

[0028] The minor diameter platen 21 is arranged at "explanation of print equipment and the print process of a color picture", next print equipment 11, and the pinch roller 22 of a minor diameter is arranged from the platen 21 at the feeding side of the minor diameter platen 21. And the ink ribbon 25 which is wound around a feed spool 23 and rolled round with a receiving spool 24 is guided by two or more guide idlers, it is built over it along the upper part of the minor diameter platen 21, and the thermal head 27 is arranged in the up location of the ink ribbon 25.

[0029] And the chuck drum 28 is arranged at the delivery side of the minor diameter platen 21, and the chuck device is attached in the periphery of the chuck drum 28. And after carrying out the chuck of the head of photographic paper 1 to the periphery of the chuck drum 28 at the time of a print, an ink ribbon 25 is stuck to the photographic paper 1 on the minor diameter platen 21 by pressure by the thermal head 27. And while rolling round an ink ribbon 25 intermittently with a take-up reel 24, synchronizing with this, photographic paper 1 is intermittently rolled round on the periphery of the chuck drum 28, and it goes to it.

[0030] And although the print of one amorous glance is performed as the print of the color picture of one amorous glance of the sublimability color material of three to 4 colors, such as cyanogen applied to the ink ribbon 25, a Magenta, yellow, and black, is carried out to photographic paper 1 by the hot printing method by the thermal head 27 When the print process of this one amorous glance is completed, as shown in drawing 1 , photographic paper 1 becomes what is twisted around the periphery of the chuck drum 28 several times (twist around about 2 - 4 times).

[0031] At the time of the print of two amorous glance of a color picture, first a thermal head 27 in and the condition of having made the upper part estranging from the minor diameter platen 21 While carrying out counterrotation of the chuck drum 28 and the minor diameter platen 21 in the direction of arrow-head e, carrying out the chuck of the head of photographic paper 1 on the chuck drum 28 Counterrotation of two or more steps of feed rollers 5 of the feed path 5 is carried out, and the photographic paper 1 twisted around the periphery of the chuck drum 28 is pulled back in the feed path 5 from the back end side to the print starting position of one amorous glance.

[0032] In and the place where photographic paper 1 was pulled back to the print starting position of one amorous glance After stopping the chuck drum 28 and the minor diameter platen 21, an ink ribbon 25 is again stuck to the photographic paper 1 on the minor diameter platen 21 by pressure by the thermal head 27. While rotating again the chuck drum 28 and the minor diameter platen 21 intermittently in the direction of arrow-head d, it carries out like the above-mentioned of the print process of the color picture of two amorous glance, rolling round an ink ribbon 25 intermittently with a take-up reel 24 synchronizing



with this. And the sum total of cyanogen, a Magenta, yellow, black, etc. can perform the print of the full color image of three to 4 color by repeating print actuation of these two amorous glance several times. [0033] and after print termination of the full color image After rolling round photographic paper 1 thoroughly in the direction of arrow-head d on the chuck drum 28 and sampling the back end of the photographic paper 1 thoroughly in the direction of arrow-head c from between the minor diameter platen 21 and pinch rollers 22, counterrotation of the chuck drum 28 is carried out in the direction of arrow-head e. The photographic paper 1 is shortly sent in in the delivery path 12 from the back end side, and photographic paper 1 is discharged in the direction of arrow-head f in accordance with the delivery path 12 with two or more steps of delivery rollers 13. And in the middle of this delivery, the chuck device of the chuck drum 28 is canceled and photographic paper 1 is thoroughly discharged in the direction of arrow-head f from a back end side on the delivery base 16.

[0034] As mentioned above, although the gestalt of operation of this invention was explained, based on the technical thought of this invention, various kinds of modification is possible for this invention, without being limited to the gestalt of the above-mentioned example. For example, this invention is applicable to various kinds FAX, copy machines, etc. other than a color printer.

[0035]

[Effect of the Invention] The form package and printer of this invention which were constituted as mentioned above do the following effectiveness so.

[0036] Where the form package of claim 1 is a form manufacturer and the form of 50-100 sheets is beforehand contained in the laminating condition in a package Since can pack up with a plastic bag etc., a user can be supplied, a user opens a plastic bag and it enabled it to set the form of a laminating condition at once into the paper tray of a printer with a form package The set activity of the form to paper traies, such as a color printer, can be quickly done on insurance very easily.

[0037] since the form package of claim 2 was put in after the form and the pawl for prevention was formed -- \*\*\*\* -- though it is easy and is low cost structure, inconvenience in which a user inserts the form of a different class in a form package etc. accidentally can be prevented beforehand, and the form of dedication can always be set to a color printer etc. in comfort.

[0038] Since it can detect the class of form automatically by the sensor for class distinction by the side of the printer when a form is set to a color printer etc., since the form package of claim 3 displayed the code for class distinction of a form, a user feels easy to a color printer etc. about the form of dedication, and it can set him to it.

[0039] Since it formed the incorrect insertion prevention means to a printer, the form package of claim 4 can prevent beforehand the incorrect insertion at the time of setting this form package to paper traies, such as a color printer, and he always feels easy and it can set this form package to a paper tray.

[0040] the direction which needs a form package in case it can prevent upwards that the form package of claim 5 breaks in the direction where a form package is unnecessary in case [ of the form path of insertion ] a form package is set to paper traies, such as a color printer, since the bendable part was mostly formed in pars intermedia only in the one direction, and an internal form jumps out of music as much as possible and a form sticks by pressure to a feed roller by the feed lever in the interior, such as a color printer, -- easy -- a crimp -- easy -- paper can feed smoothly to a form.

[0041] Since the form package of claim 6 formed the hole for form existence distinction, it can detect the existence of the form in a form package automatically by sensors for form existence distinction, such as a color printer.

[0042] since the form package of claim 7 formed form location \*\*\*\*\* to a printer, when a form is set to paper traies, such as a color printer, with a form package, location appearance of the form in a form package can be carried out to accuracy, and it can make it it, and can feed the form within a color printer to accuracy.

[0043] Since the form package of claim 8 formed the guide piece for form receipts and payments in the underside of form receipts-and-payments opening, it can take the form into a form package in and out easily.

[0044] Since the printer of claim 9 prepared the paper tray to which a form is set with a form package, it can set a form easily.

[0045] Since the printer of claim 10 formed the sensor for class distinction which reads the code for class distinction of a form package, it can distinguish the class of form automatically.

[0046] Since the printer of claim 11 formed the engagement section for incorrect insertion prevention with which the incorrect insertion prevention means of a form package engages in the paper tray, it can prevent beforehand incorrect insertion of a form package into a paper tray.



[0047] Since the printer of claim 12 formed the lift plate for feeding with which a form receipts-and-payments opening side is laid rather than the bendable part of a form package in a paper tray, it can ensure feeding of the form in inside, such as a color printer.

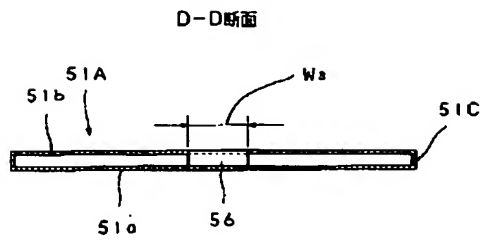
[0048] Since the printer of claim 13 formed the sensor for existence distinction of the form inserted into the hole for existence distinction of the form of a form package, it can distinguish the existence of the form in a form package automatically in the interior, such as a color printer.

[0049] Since the printer of claim 14 prepared location \*\*\*\*\* of a left Uichi pair which is inserted in the lift plate for feeding attached free [ a revolution ] in the paper tray relatively in form location \*\*\*\*\* of the right-and-left both sides of a form package, and performs location \*\*\*\* of the longitudinal direction of the form, it can perform location \*\*\*\* of the form of a form package to accuracy in the feeding side of the form from a paper tray, and can always feed a form to accuracy.

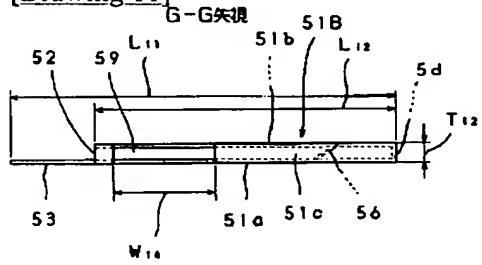
---

[Translation done.]

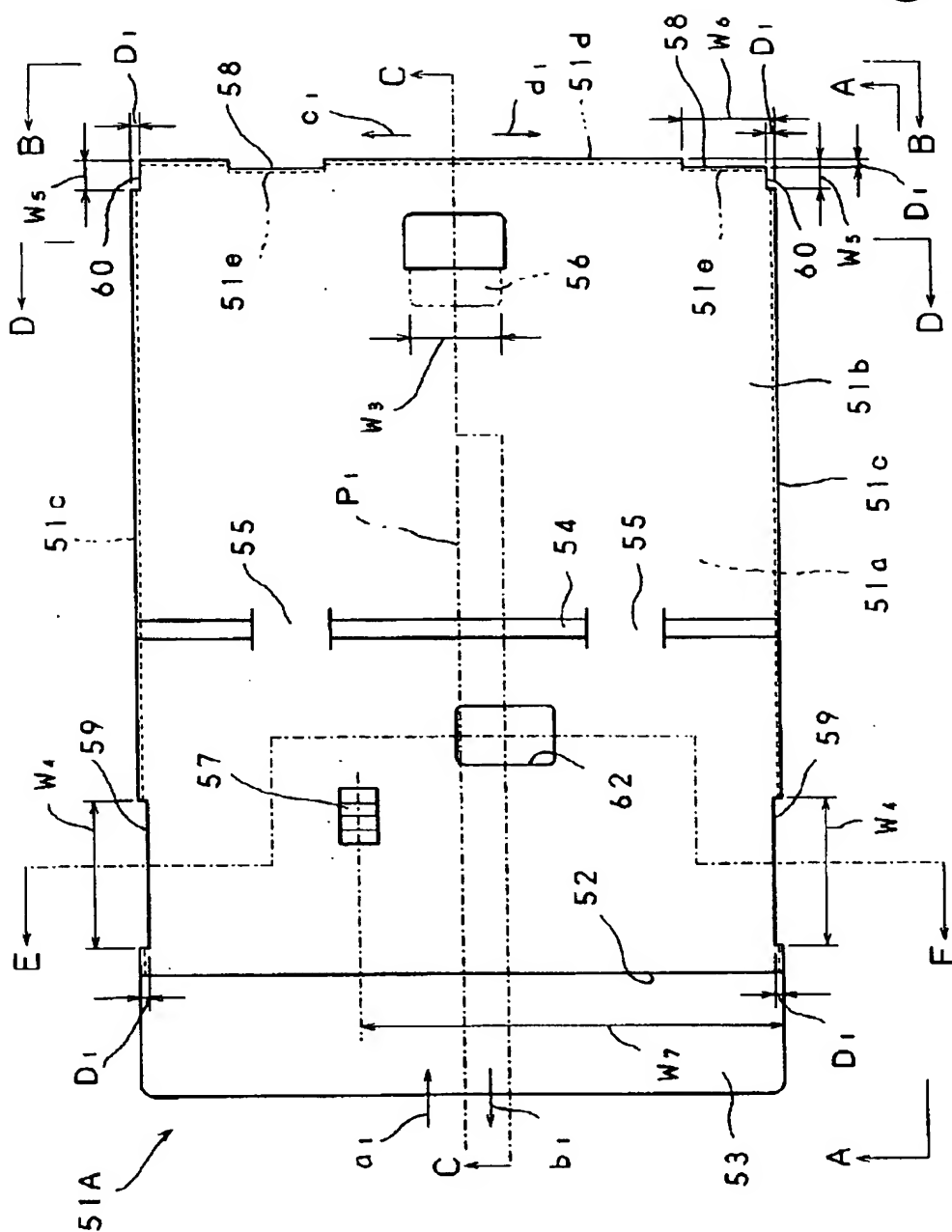




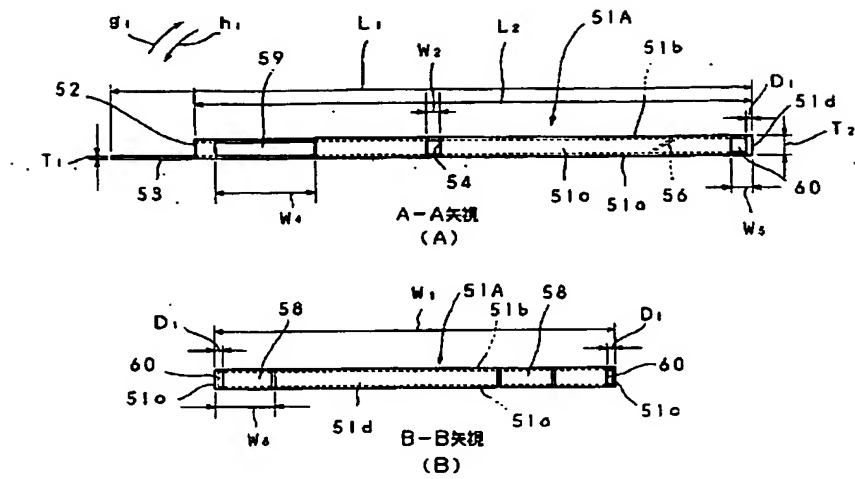
[Drawing 11]



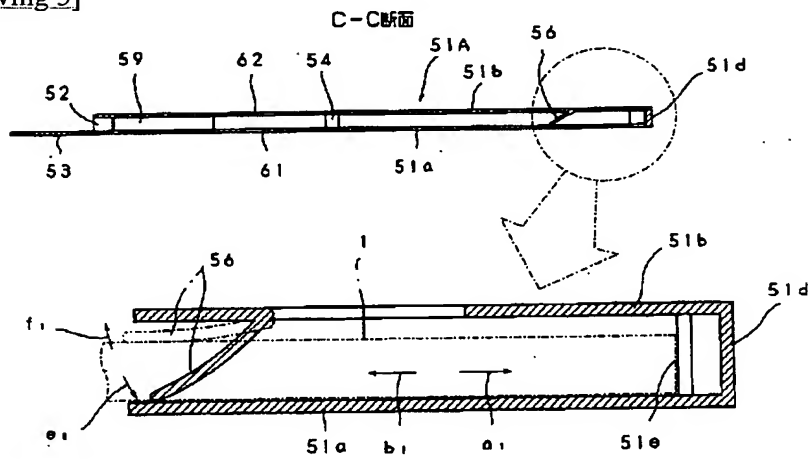
[Drawing 3]



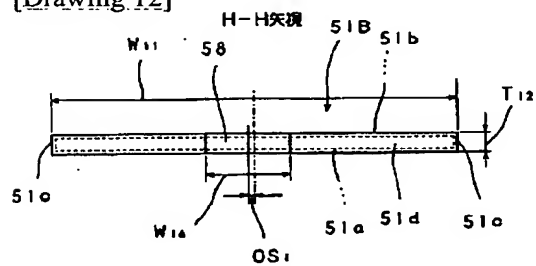
[Drawing 4]



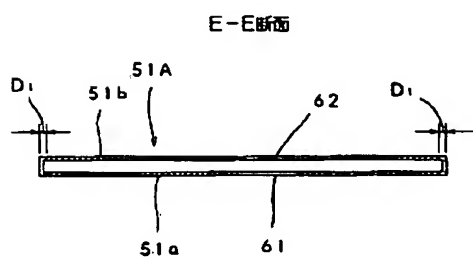
[Drawing 5]



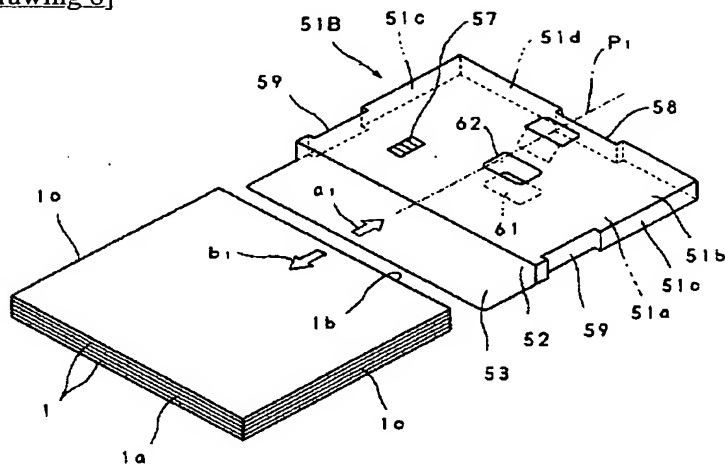
[Drawing 12]



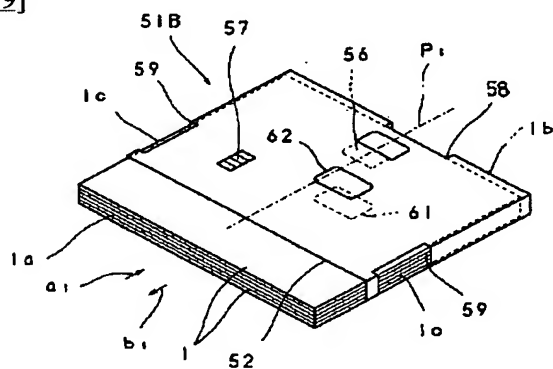
[Drawing 7]



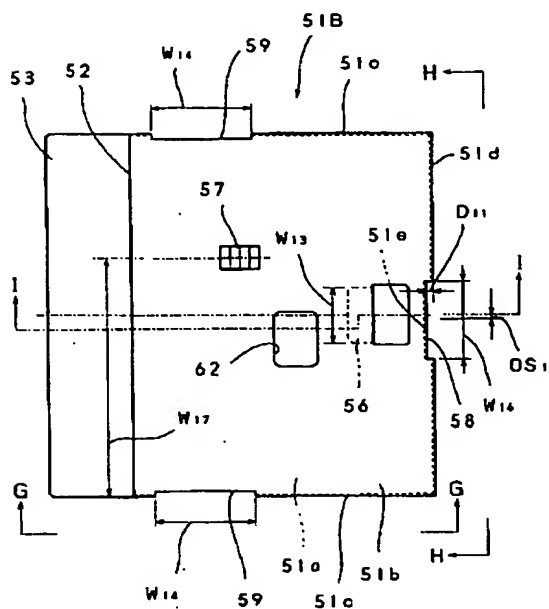
[Drawing\_8]



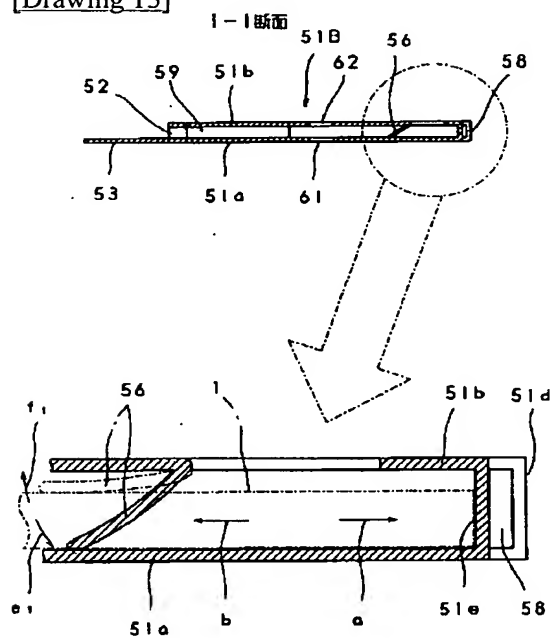
[Drawing 9]



[Drawing 10]

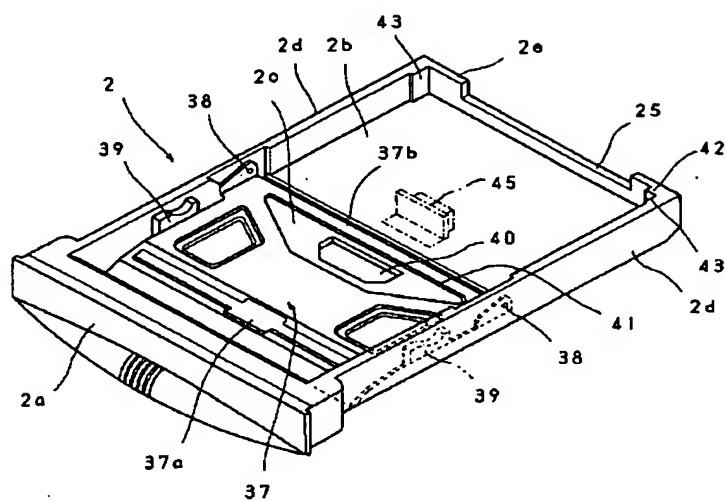


[Drawing 13]

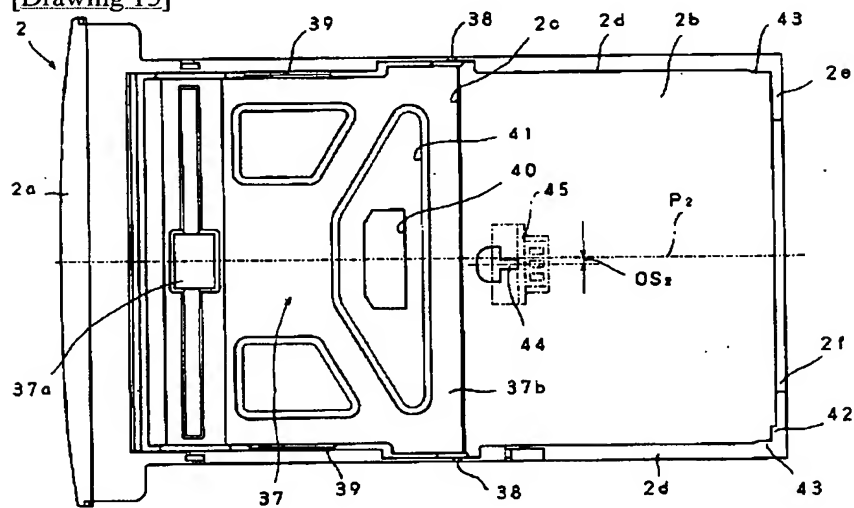


[Drawing 14]

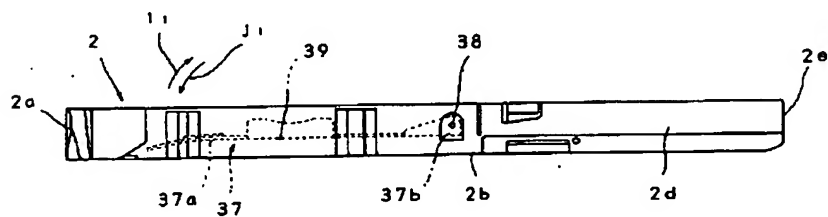




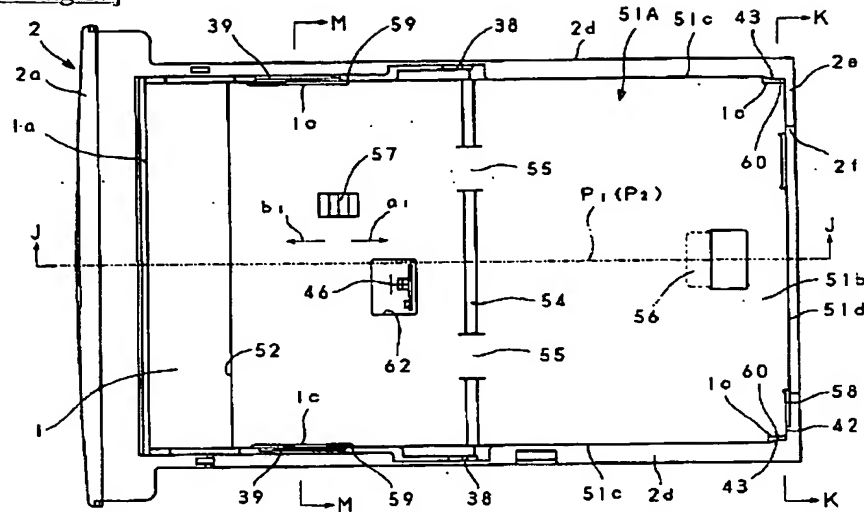
[Drawing 15]



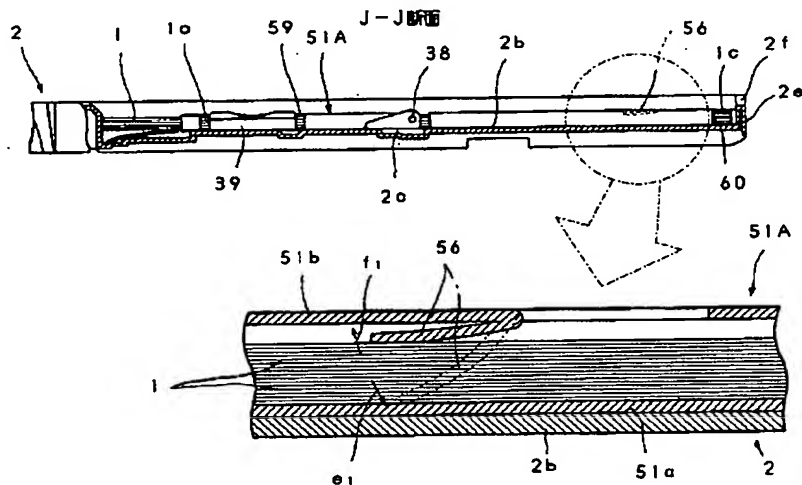
[Drawing 16]



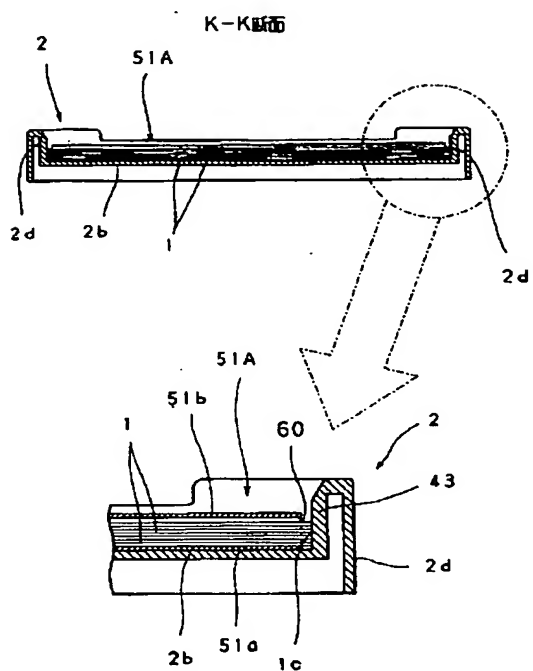
[Drawing 17]



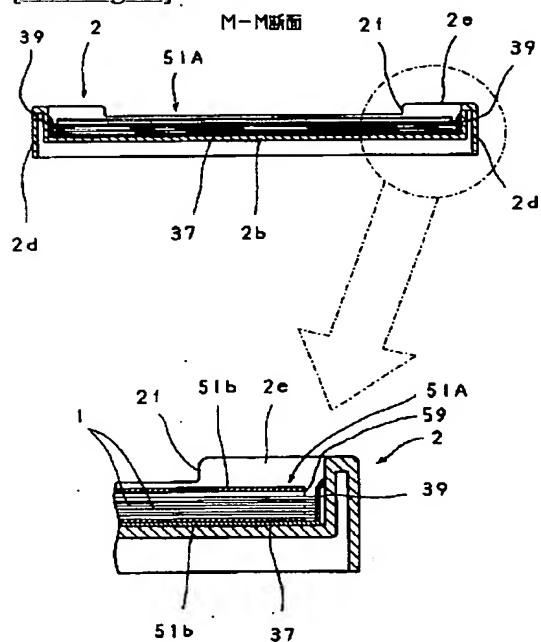
[Drawing 18]



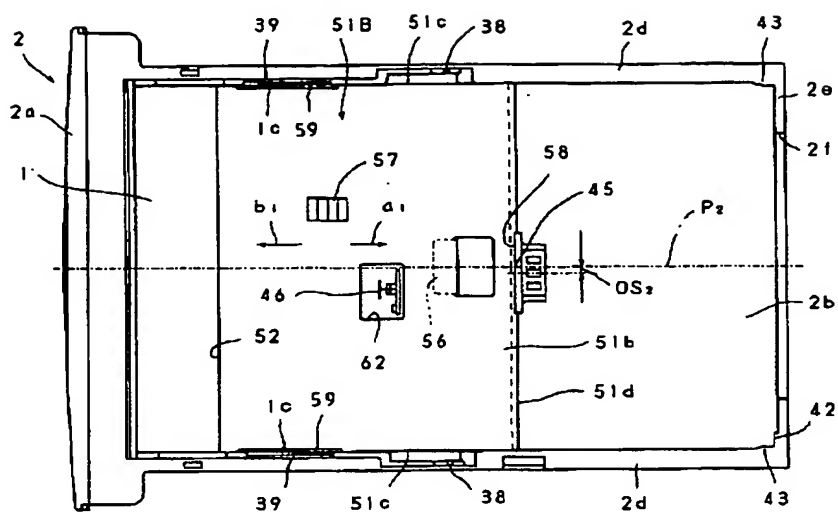
[Drawing 19]



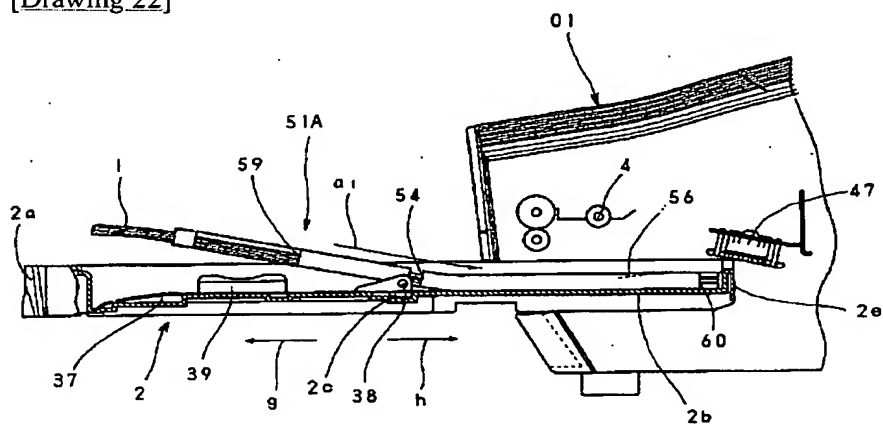
[Drawing 20]



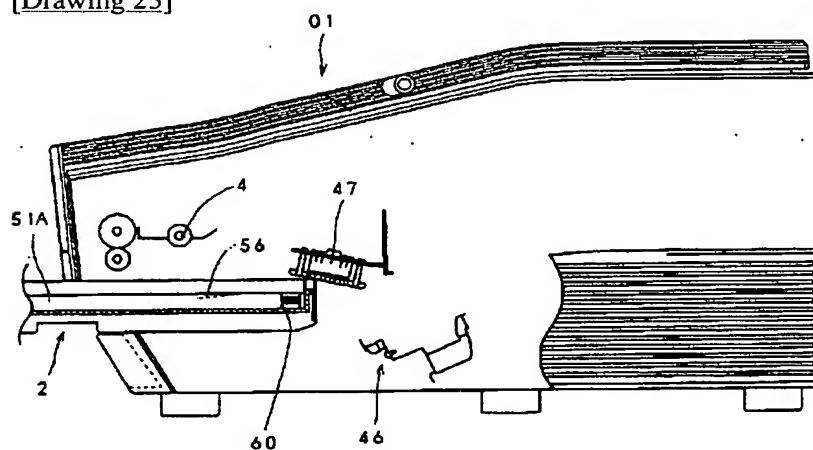
[Drawing 21]



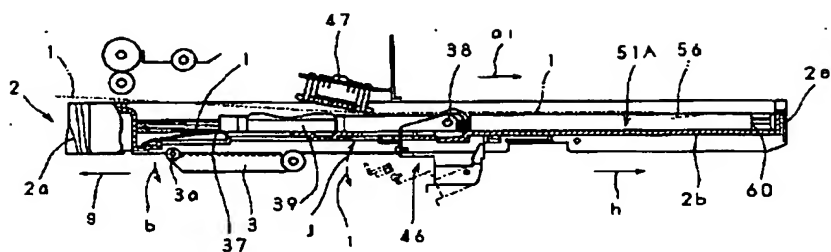
[Drawing 22]



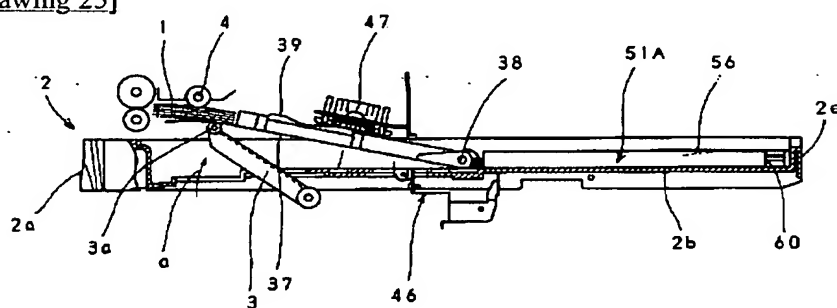
[Drawing 23]



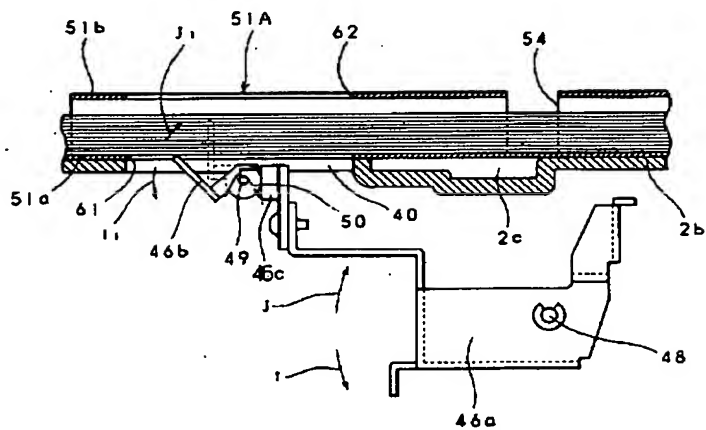
[Drawing 24]



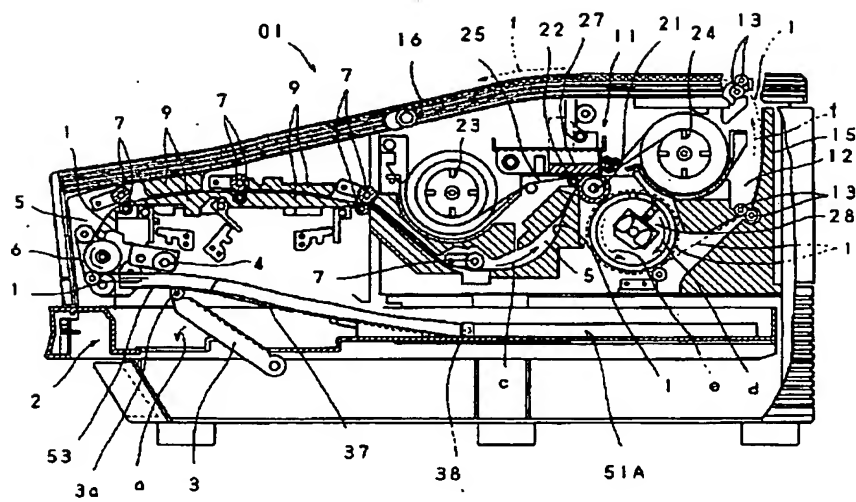
[Drawing 25]



[Drawing 26]



[Drawing 27]



[Translation done.]

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☒ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☒ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**